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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,974	08/18/2006	Kazuhito Niwano	295156US2PCT	2197
22850 7590 10/19/2011 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER LEBASSI, AMANUEL				
ART UNIT		PAPER NUMBER		
2617				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/589,974

Applicant(s)

NIWANO, KAZUHIITO

Examiner

AMANUEL LEBASSI

Art Unit

2617

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-14 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-14 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 18 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-C1000)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No(s)/Mail Date ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1- 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang et al. US 6414943 in view of Yamamoto US 20020024936.

Regarding claim 1, Hwang discloses a mobile station (**col. 3, lines 51-52 -a mobile station**). Hwang discloses a transmit buffer for storing data about a plurality of communication services on a communication-service-by-communication-service basis or on a transmit-channel-by- transmit-channel basis (**col. 3, lines 51-52 – where the mobile station 1 includes a transmit buffer 1b for temporarily storing transmit data according to the requested radio data service**). Hwang discloses an amount-of-data information determining unit that examines the data which are stored in said transmit buffer on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis to determine at least one value indicating an amount-of-data stored on a communication- service-by-communication-service basis or transmit-channel-by-transmit-channel basis (**col. 3, lines 51-58 where the transmit buffer is examined and compare the amounts of data stored in the transmit buffers 1b and 2b with the first threshold TH.sub.LOW therefore determine at**

least one value indicating an amount-of-data stored); and a transmitting unit that transmits the at least one value indicating the amount-of-data stored on the communication-service-by-communication- service basis or transmit-channel-by-transmit-channel basis determined by said amount-of-data information determining unit to a base station (see **Fig. 1 and col. 3, lines 52-58 where a transmitter transmits the amount-of-data to the radio service (Base Station)**).

Hwang is silent on disclosing unit that monitors the data which are stored in said transmit buffer.

However, Yamamoto teaches monitoring the data which are stored in said transmit buffer (**paragraph [0006] and fig. 1 where each terminal unit is provided with a transmission buffer 15 for storing data to be transmitted to the resource monitoring device 2**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the inventions of Hwang and add that of Yamamoto. The motivation would be to increase data transmission throughput (**paragraph [0001]**).

Regarding claim 2, Hwang discloses , wherein said amount-of-data information determining unit converts the at least one value indicating the amount-of-data stored on the communication-service-by-communication-service basis or transmit-channel-by-transmit-channel basis into a binary digit number, and outputs the binary digit number to the transmitting unit (see **Fig. 1, where the data is digitally transmitted therefore binary**).

Regarding claim 3, Hwang discloses wherein said amount-of-data information determining unit converts the at least one value indicating the amount-of-data stored on the communication-service-by-communication-service basis or transmit-channel-by-transmit-

channel basis into a data occupation ratio of the transmit buffer, and outputs the data occupation ratio to the transmitting unit (see above).

Regarding claim 4, Hwang discloses wherein said amount-of-data information determining means unit converts the at least one value indicating the amount-of-data stored on the communication-service-by-communication-service basis or transmit-channel-by-transmit-channel basis amount of data information into a time, and outputs the amount of data information indicating the time to the transmitting means unit (**col. 4, lines 46-col. 5, lines 6**).

Regarding claim 5, Hwang discloses wherein said amount-of-data information determining means unit converts the at least one value indicating the amount-of-data stored on the communication-service-by-communication-service basis or transmit-channel-by-transmit-channel basis amount of data information into a transmission rate, and outputs the amount of data information indicating the transmission rate to the transmitting means unit (**col. 1, lines 51-56**).

Regarding claim 6, Hwang discloses wherein said amount-of-data information determining unit converts the at least one value indicating the amount-of-data stored on the communication-service-by-communication-service basis or transmit-channel-by-transmit-channel basis into a number of bits per second or a number of bits per unit time (**col. 1, lines 51-56 – data rate i.e. bits per second**)..

Regarding claim 7, Hwang discloses wherein said amount-of-data information determining unit converts the at least one value indicating the amount-of-data stored on the communication-service-by-communication-service basis or transmit-channel-by-transmit-channel basis into a channel amplitude coefficient or a channel amplitude coefficient ratio, and outputs the channel amplitude coefficient or the channel amplitude coefficient ratio to the transmitting unit (col. 4, lines 25-37)..

Regarding claim 8, Hwang discloses wherein said amount-of-data information determining unit converts the at least one value indicating the amount-of-data stored on the communication-service-by-communication-service basis or transmit-channel-by-transmit-channel basis into a power dimension or a power dimension ratio, and outputs the power dimension or the power dimension ratio to the transmitting means unit (abstract).

Regarding claim 9, Yamamoto teaches wherein said amount-of-data information determining unit outputs an index indicating a combination of pieces of communication-service-by-communication-service or transmit-channel-by-transmit-channel amount-of-data information to the transmitting unit, instead of the at least one value indicating the amount-of-data stored on the communication-service-by-communication-service basis or transmit-channel-by-transmit-channel basis (see Fig. 1).

Regarding claim 10, Hwang discloses a base station comprising: a receiving unit that receives at least one value indicating an amount of data stored in a transmit buffer of a mobile

station on a communication-service-by-communication-service basis or transmit-channel-by-transmit-channel basis from the mobile station (**Fig. 1 and col. 3, lines 59-65 - where the network / BTS receives a transmit data**). Hwang discloses an assignment unit that examines assignment of radio resources for data to be transmitted from said mobile station according to the at least one value indicating the amount of data stored in the transmit buffer of the mobile station on the communication-service-by-communication-service basis or transmit-channel-by-transmit-channel basis received by said receiving unit (**col. 3, lines 59-65 where the transmit buffer which is to be transmitted from the mobile station is examined and col. 3, lines 51-58 where the transmit buffer is examined and compare the amounts of data stored in the transmit buffers 1b and 2b with the first threshold TH.sub.LOW therefore determine at least one value indicating an amount-of-data stored**) and a notifying unit that notifies transmission control information indicating the assignment of radio resources determined by said assignment determining unit to said mobile station (**Fig. 1 and lines 45-65**).

Hwang is silent on disclosing determining assignment of radio resources for data. However, Yamamoto teaches determining assignment of radio resources (**paragraph [0006] where appropriate resources are assigned to the terminal units or the effective use of the resources.**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the inventions of Hwang and add that of Yamamoto. The motivation would be to increase data transmission throughput (**paragraph [0001]**).

Regarding claim 11, Hwang discloses a communication system provided with a base station which notifies transmission control information indicating radio resources, and a mobile station which transmits data to said base station according to the transmission control information notified from said base station (**col. 4 lines 24-31 where the mobile station 1 sends the data corresponding to the radio packet data service or control signals, temporarily stored in the transmit buffer 1b, to the network 2 with the plural radio bearers at the data rate**). Hwang disclose said mobile station comprising: a transmit buffer for storing data about a plurality of communication services on a communication-service-by-communication-service basis or on a transmit-channel-by- transmit-channel basis (**col. 3, lines 51-52 – where the mobile station 1 includes a transmit buffer 1b for temporarily storing transmit data according to the requested radio data service**). Hwang discloses an amount-of-data information determining unit that examines the data which are stored in said transmit buffer on a communication-service-by- communication-service basis or on a transmit-channel-by-transmit-channel basis to determine at least one value indicating an amount-of-data stored on a communication- service-by-communication-service basis or transmit-channel-by-transmit-channel basis (**Fig. 1, a transmitting means that transmits and col. 4, lines 24-32 where the transmitter transmits to the network 2 the data corresponding to the radio packet data service or control signals and col. 3, lines 51-58 where the transmit buffer is examined and compare the amounts of data stored in the transmit buffers 1b and 2b with the first threshold TH_{sub}.LOW therefore determine at least one value indicating an amount-of-data stored**); and a transmitting unit that transmits the at least one value indicating the amount-

of-data stored on the communication-service-by-communication- service basis or transmit-channel-by-transmit-channel basis determined by said amount-of-data information determining unit to said base station (**Fig. 1, a transmitting means that transmits and col. 4, lines 24-32 where the transmitter transmits to the network 2 the data corresponding to the radio packet data service or control signals**). Hwang discloses where the said base station comprising: a scheduler for assigning radio resources used for carrying out data transmission to said mobile station according to the at least one value indicating the amount-of-data stored received from said mobile station (**col. 4, lines 38-62**). Hwang is silent on disclosing unit that monitors the data which are stored in said transmit buffer.

However, Yamamoto teaches monitoring the data which are stored in said transmit buffer (**paragraph [0006] and fig. 1 where each terminal unit is provided with a transmission buffer 15 for storing data to be transmitted to the resource monitoring device 2**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the inventions of Hwang and add that of Yamamoto. The motivation would be to increase data transmission throughput (**paragraph [0001]**).

Regarding claim 12, Hwang discloses an amount-of-data information transmission method(**abstract- method and apparatus for controlling asymmetric dynamic radio bearers in a mobile packet data communications system**). Hwang discloses examining data transmitted from a terminal on a communication-service- by-communication-service basis or on a transmit-channel-by-transmit-channel basis (**col. 3, lines 51-58 where the transmit buffer is examined**). Hwang discloses determining at least one value indicating an amount-of-data stored

on a communication-service-by-communication- service basis or on a transmit-channel-by-transmit-channel basis (col. 5, lines 56-63 where the amounts of data stored in the transmit buffers is determined and compare the amounts of data stored in the transmit buffers 1b and 2b with the first threshold TH.sub.LOW therefore determine at least one value indicating an amount-of-data stored) and transmitting the at least one value indicating the amount-of-data stored which is determined on a communication-service-by-communication-service basis or on a transmit-channel-by-transmit-channel basis to a base station (see Fig. 1 and col. 3, lines 52-58 where a transmitter transmits the amount-of-data to the radio service (Base Station)).

Hwang is silent on disclosing monitoring the data which are transmitted. However, Yamamoto teaches monitoring the data which are transmitted (paragraph [0006] and fig. 1 where each terminal unit is provided with a transmission buffer 15 for storing data to be transmitted to the resource monitoring device 2).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the inventions of Hwang and add that of Yamamoto. The motivation would be to increase data transmission throughput (paragraph [0001]).

Regarding claim 14, Hwang discloses a wireless communication method (see abstract, mobile packet data communications system). Hwang discloses when data about a plurality of communication services are stored in transmit buffers on a communication-service-by-communication-service basis or on a transmit-channel-by- transmit-channel basis, monitoring the data which are stored in the transmit buffers on a communication-service-by-communication-

service basis or on a transmit-channel-by- transmit-channel basis (**col. 3, lines 51-58 where the transmit buffer is examined**). Hwang discloses determining at least one value indicating an amount of data stored on a communication-service-by-communication-service basis or on a transmit- channel-by-transmit-channel basis (**col. 5, lines56-64 the amounts of data stored in the transmit buffers is determined**). Hwang discloses transmitting the at least one value indicating the amount-of-data stored which is determined on a communication-service-by-communication- service basis or on a transmit-channel-by-transmit-channel basis to a base station (see **Fig. 1 and col. 3, lines 52-58 where a transmitter transmits the amount-of-data to the radio service (Base Station) and examined and compare the amounts of data stored in the transmit buffers 1b and 2b with the first threshold TH.sub.LOW therefore determine at least one value indicating an amount-of-data stored**). Hwang discloses when the base station receives the at least one value indicating the amount-of-data stored which is determined on a communication-service-by- communication-service basis or on a transmit-channel-by-transmit-channel basis from a mobile station, determining radio resources for data to be transmitted from said mobile station according to the at least one value indicating the amount-of-data stored (**col. 4, lines 24-31 where the base station receives amount-of-data information and col. 4, lines 38-56 where the amount of data is compared therefore determining radio resources for data to be transmitted**). Hwang discloses notifying transmission control information indicating the radio resources to said mobile station (**col. 1, lines 49-52 where the network informs the mobile station of the data**) and said mobile station transmitting the data to said base station according to the transmission control information notified from said base station (**col. 3, lines 52-58 where a transmitter transmits the amount-of-data to the radio**

service (Base Station)). Hwang is silent on disclosing means for monitoring the data which are stored in said transmit buffer.

However, Yamamoto teaches monitoring the data which are stored in said transmit buffer **(paragraph [0006] and fig. 1 where each terminal unit is provided with a transmission buffer 15 for storing data to be transmitted to the resource monitoring device 2).**

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the inventions of Hwang and add that of Yamamoto. The motivation would be to increase data transmission throughput **(paragraph [0001]).**

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim13 is rejected under 35 U.S.C. 102(b) as being unpatentable by Hwang et al. US 6414943.

Regarding claim 13, Hwang discloses a transmission-control-information notification method **(col. 4 lines 24-31 where the mobile station 1 sends the data corresponding to the radio packet data service or control signals).** Hwang discloses when a base station receives at least one value indicating an amount-of-data stored in a transmit buffer of a mobile station which is determined on a communication-service-by-communication-service basis or on a transmit-

channel-by- transmit-channel basis from the mobile station, determining radio resources for data to be transmitted from said mobile station according to the at least one value indicating the amount-of-data stored information (col. 4, lines 24-31 where the base station receives amount-of-data information and col. 4, lines 38-56 where the amount of data is compared therefore determining radio resources for data to be transmitted and compare the amounts of data stored in the transmit buffers 1b and 2b with the first threshold TH.sub.LOW therefore determine at least one value indicating an amount-of-data stored) and notifying transmission control information indicating the radio resources to said mobile station (col. 1, lines 49-52 where the network informs the mobile station of the data).

Conclusion

1. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Amanuel Lebassi, whose telephone number is (571) 270-5303. The Examiner can normally be reached on Monday-Thursday from 8:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Nick Corsaro can be reached at (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Amanuel Lebassi
/A. L./
9/30/2011

/NICK CORSARO/
Supervisory Patent Examiner, Art Unit 2617